UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,993	02/12/2002	Yoshihiro Ishikawa	219414US2	5090

22850 7590 04/04/2006

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
WILSON, ROBERT W	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/072,993	ISHIKAWA ET AL.	
	Examiner	Art Unit	
	Robert W. Wilson	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 February 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☒ Claim(s) *2-22 and 24-39* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 February 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2/12/02, 12/29/05, & 5/9/02
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Objections

1. Claims 2-22 & 24-39 are objected to because of the following informalities:

Referring to claims 2-3,6-13, 19-20-22, 33, & 34, the examiner objects to the phrase "interference electric power". For example, electric power does not travel through free space. An electric field travels through free space. The examiner suggests considering amending to interference electric field.

Referring to claims 4-9, 14-22, & 32-35, the examiner objects to the phrase "transmission electric power". Electric power does not travel through free space. An electric field travels through free space. The examiner suggests considering amending to transmission electric field.

Referring to claims 13 & 18 the examiner objects to the phrase "signal to noise electric power ratio" because it is idiomatic English. The examiner suggests just saying "signal to noise power".

Referring to claim 16, the examiner objects to the phrase "is derived for every classification of communication". The examiner suggests that the applicant amend this limitation to define types of communication.

Referring to claim 17, the examiner objects to the phrase "reception of electric power". Electric power does not travel through free space. An electric field travels through free space. The examiner suggests considering amending to reception of electric field.

Referring to claim 22, the examiner objects to the phrase "transmission power". Electric power does not travel through free space. An electric field travels through free space. The examiner suggests considering amending to transmission field. Appropriate correction is required.

Title

2. The examiner objects to the word "novel" in the title because the word novel implies patentability and patentability has not yet been determined. The examiner suggests the following title: Controlling Radio Channel Settings

Specification

3. The disclosure is objected to because of the following informalities: the examiner objects to the use of the following phrases throughout the specification: allowableness/disallowableness, interference electric power, transmission electric power, and signal to noise power ratio. The applicant never defines whether the slash between allowableness & disallowableness means "and" or "or". The applicant needs to clarify. The applicant also uses "interference electric power", "transmission electric power", "signal to noise power ratio", and "transmission electric power" which are literal translations from a foreign language into idiomatic English" It should be noted that electric power and transmission electric power do not travel in free space. Electric fields travel in free space. The examiner suggests that the applicant amend the specification to state interference electric field and transmission electric field instead of interference electric power and transmission electric power where appropriate. The examiner also suggests that the applicant shorten "signal to noise power ratio" to "signal to noise ratio". Appropriate correction is required.

4. The examiner objects to the specification because the applicant did not disclose his patent (U.S. Patent No.: 5,666,655) which is for a patent which is substantially claims the same invention as was claimed in this application. Patent No.: 5,666,655 is a 102 B reference. The examiner reminds applicant and applicant's representative of their duty to disclose and that intentional failure to disclose would constitute fraud.

Drawings

5. The drawings are objected to because the following:

Figure 1 needs elemental names to be added to the elemental numbers. For example, 111 is the Base Station, 112 is the Mobile Station, 113 is the Network Control Apparatus.

Figure 3, element 202 is misnamed it should be "Separation or Demultiplexing device, 113 is missing the elemental name which is the Network Control Apparatus.

Figure 5, element 302 is the Separation or Demultiplexing device, 307 is the Common Unit and Common Amplifier, 316 is the Hardware Device Allocation Control.

Figures 8 & 15, element 113 name is missing and this should be labeled Network Control Apparatus, 202 is misnamed it should be called Separating or Demultiplexing, 213 should be Hardware Device Management Allocation.

Figure 10, element 111 is missing the name Base Station.

Figure 12, element 113 name is missing and this should be labeled Network Control Apparatus and element 202 is misnamed it should be named Separating or Demultiplexing.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet

should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Referring to claims 6-9 & 19-39, the phrase "allowableness/disallowableness" which utilizes a slash. The examiner cannot tell whether the slash means "and" or "or".

Referring to claim 18, it is not clear where the at least one limitations begin and end. It is also not clear where each of the measurement are made; therefore, this limitation in unclear.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3, 23-31, & 38-39 are rejected under 35 U.S.C. 102(B) as being anticipated by Ishikawa (U.S. Patent No.: 5,666,655).

Referring to claims 1 & 23, Ishikawa teaches: A radio network control apparatus (15 & 14 per Fig 2) controlling communications between a subordinate base station apparatus (11 per Fig 1) and a mobile station apparatus (12 per Fig 1) in a mobile communication system (Fig 1) employing CDMA scheme (col. 13 line 31); a determination obtaining part obtaining a determination result as to whether or not a spread code used for communications (spreading controller col. 13 lines 27-38 which determines if a spreading code is allocation is accept/ reject); a predetermined hardware device in the base station apparatus (14 per Fig 2 and per col. 8 lines 32-36 determines which device transceiver allocation is accept/reject) and a radio resources can be allocated (15 per Fig 2 & col. 9 lines 45-62 determines which channel or resources allocation is accept/reject)

and a radio channel setting part setting up radio channel between the base station apparatus and the mobile station apparatus when the spreading code, predetermined hardware device and radio resources can be allocated (15 per Fig 2 manages the channel per col. 7 lines 66-67 or sets up the radio channel between the base station (11 per Fig 1) the mobile station (12 per Fig 1) and determines spreading code, transceiver, and channel per col. 9 line 45-62 and col. 13 lines 27-38)

In addition Ishikawa teaches:

Regarding claim 2, wherein a first uplink interference electric power which is the total of the interference electric power directed to the base-station apparatus from the mobile-station apparatus is measured and when thus-obtained uplink interference electric poser is equal to or smaller than a first threshold, it is determined that the radio resource can be allocated (col. 9 lines 45-62 & col. 13 lines 27-38)

Regarding claim 3, wherein it is determined to allow allocation of a radio resource for an uplink circuit directed to the base station apparatus form the mobile station apparatus when the first uplink interference electric power is equal to or smaller than the first threshold (col. 9 lines 45-62 & col. 13 lines 27-38)

Regarding claim 24, further comprising" a spread code allocation allowableness/disallowableness determining part determining allocation allowableness/disallableness for the spread code (controller which determines allocation accept/reject or allowableness/disallowableness per col. 13 lines 27-38)

Regarding claim 25, further comprising: a spread code allocation allowableness/disallowableness determining result receiving part receiving a determination result on the allocation alloableness/disallowableness for the spread code from the base-station apparatus (controller inherently receive accept/reject or allowableness/disallowableness per col. 13 lines 27-38) for spreading code from the base-station apparatus)

Regarding claim 26, further comprising: a hardware device allocation allowableness/disallowableness determining part determining allocation allowableness/disallowableness for the predetermined hardware device (14 per Fig 2 determines

allocation accept/reject or allowableness/disallowableness for transceiver or hardware device per col. 8 lines 32-36)

Regarding claim 27, further comprising: a hardware device allocation allowableness/disallowableness determining part determining result receiving part receiving a determination result on the allocation allowablness/disallowableness for the predetermined hardware device form the base-station apparatus (14 per Fig 2 inherently receives allocation accept/reject or allowableness/disallowableness for transceiver or hardware device per col. 8 lines 32-36)

Regarding claim 28, further comprising: radio resource allocation allowableness/disallowableness determining part determining allocation allowableness/disallowableness for the radio resource (15 per Fig 2 determines allocation channel or resource accept/reject per col. 9 lines 45-62)

Regarding claim 29, further comprising a radio resource allocation allowableness/disallowablness determining result receiving part receiving a determination result on the allocation allowablness/disallowalbness for the radio resource from the base-station apparatus (15 per Fig 2 inherently receives allocation channel or resource accept/reject per col. 9 lines 45-62)

Regarding claim 30, wherein the radio resource allocation alllowableness/disallowableness determining part determines that allocation of the radio resource is possible when the first uplink interference electric power which is the total of the interference electric power directed to the base station apparatus form the mobile-station apparatus is equal to or smaller than a first threshold (15 per Fig 2 determines per col. 9 lines 45-67 and col. 13 lines 26-38)

Regarding claim 31 wherein the radio resource allocation allowableness/disallowableness determining part determining that allocation of a radio resource for an uplink circuit directed to the base station apparatus form the mobile-station apparatus is possible when the first uplink interference electric power is equal to or smaller than the first threshold (15 per Fig 2 determines per col. 9 lines 45-67 and col. 13 lines 26-38)

Referring to claims 38, Ishikawa teaches: A base station apparatus (11 per Fig 1) performing communications with a mobile-station apparatus (12 per Fig 1) under control of the mobile network control apparatus (15 & 14 per Fig 2) in a mobile communication system (Fig 1) employing CDMA scheme (col. 13 line 31);

an allocation allowableness/disallowableness determining part determining whether allocation of at least any one a spread code used for communication (controller per col. 13 lines 27-38 which determines if a spreading code is allocation accept/reject or allowableness/disallowableness);

a predetermined hardware device in the base station apparatus (14 per Fig 2 determines which device transceiver is available or not available or possible) and a radio resources is possible (15 per Fig 2 determines which channel or radio resources are available or not available or possible) determining part wherein allocation of a radio channel between the base-station and the mobile station apparatus is allowed when the spreading code , predetermine hardware and radio device can be allocated (14 per Fig 2, controller per col. 13 lines 27-38 and 15 per Fig 2 inherently transmit availability to 15 per Fig 2 when the spreading code, transceiver, and channel are accept/reject to 15 per Fig 2 which determines if the combination is accept/reject)

wherein allocation of a radio channel between the base-station apparatus and the mobile-station apparatus is allowed when the spread code, predetermined hardware device and radio resource can be allocate (15 per Fig 2 manages the channel per col. 7 lines 66-67 or sets up the radio channel between the base station (11 per Fig 1) the mobile station (12 per Fig 1) and determines spreading code, transceiver, and channel per col. 9 line 45-62 and col. 13 lines 27-38)

Referring to claims 39, Ishikawa teaches: A mobile communication system (Fig 1) comprising a base station apparatus (11 per Fig 1) and a mobile-station apparatus (12 per Fig 1) under control of a radio network control apparatus (15 & 14 per Fig 2 and controller per col. 13 lines 27-38) employing CDMA scheme (col. 13 line 31);

At least a base-station apparatus (11 per Fig 1) and a radio network control apparatus (Fig 2) an allocation allowableness/disallowableness determining part determining whether allocation of at least any one a spread code used for communication between the base-station (controller per col. 13 lines 27-38 which determines if a spreading code is allocation accept/reject or allowableness/disallowableness) between the base-station apparatus (11 per Fig 1) and the mobile station apparatus (12 per Fig 10) can be allocated.

A hardware device allocation allowableness disallowablenss determining part determination whether not a predetermined hardware device (14 per Fig 2 determines transceiver allocation accept/reject or allowableness/disallowableness per col 8 lines 32-36) between the base-station apparatus (11 per Fig 1) and the mobile station apparatus (12 per Fig 10) can be allocated.

A radio resource allocation allowableness/disallowableness determining part determination whether or not a radio resource used for the communications can be allocated (15 per Fig 2

determines channel or radio resource allocation accept/reject or allowableness/disallowableness used for communication can be allocated)

A radio channel setting part setting a radio channel between the base station apparatus and the mobile station apparatus when the spread code, predetermined hardware device and raiod resource can be allocated (15 per Fig 2 manages the channel per col. 7 lines 66-67 or sets up the radio channel between the base station (11 per Fig 1) the mobile station (12 per Fig 1) and determines spreading code, transceiver, and channel per col. 9 line 45-62 and col. 13 lines 27-38)

Claim Rejections - 35 USC § 103

9. Claims 4-9, 14-22 are is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikaw (U.S. Patent No.: 5,666,655) in view of Herrig (U.S. Patent No.: 6,591,108)

Referring to claim 4, Ishikawa teaches: the method as claimed in claim 1 and where interference power is equal to a threshold then a radio resource is determined to allow allocation of the radio resource per col. 9 lines 45-63 & per col. 13 lines 27-38)

Ishikawa does not expressly call for: wherein a first downlink transmission power which is the total of the transmission electric power directed to the mobile-station apparatus form the base-station apparatus is measured form the base-station apparatus is measured and when thus obtained first downlink transmission electric power is equal to or smaller than a second threshold it is determined

Herrig teaches: wherein a first downlink transmission power which is the total of the transmission electric power directed to the mobile-station apparatus form the base-station apparatus is measured form the base-station apparatus is measured and when thus obtained first

downlink transmission electric power is equal to or smaller than a second threshold it is determined per col. 1 lines 64-col. 2 lines 14)

It would have been obvious to add the measurement of the first downlink transmission power to determine if it is equal to a threshold of Herrig to the measurement of interference and determination of allow allocation of a radio resource of Isikawa in order to build a system which determines resource in order to minimize interference between base stations by measuring a first downlink transmission power.

Referring to claim 5, Ishikawa teaches: the method as claimed in claim 1 and where interference power is equal to a threshold then a radio resource can be allocated per col. 9 lines 45-63 & per col. 13 lines 27-38)

Ishikawa does not expressly call for: wherein a first downlink transmission power which is the total of the transmission electric power directed to the mobile-station apparatus form the base-station apparatus is measured form the base-station apparatus is measured and when thus obtained first downlink transmission electric power is equal to or smaller than a second threshold it is determined

Herrig teaches: wherein a first downlink transmission power which is the total of the transmission electric power directed to the mobile-station apparatus form the base-station apparatus is measured form the base-station apparatus is measured and when thus obtained first downlink transmission electric power is equal to or smaller than a second threshold it is determined per col. 1 lines 64-col. 2 lines 14)

It would have been obvious to add the measurement of the first downlink transmission power to determine if it is equal to a threshold of Herrig to the measurement of interference and determination of radio resource can be allocated of Isikawa in order to build a system which determines resource can be allocated which minimize interference between base stations by measuring a first downlink transmission power.

Referring to claim 6, the combination of Ishikawa and Herrig teach : the method of claim 4 and the determination based upon first uplink transmission electric power are measured by the base station apparatus. The combination of Ishikawa and Herrig do not expressly call for: allocation allowablneness/disallowableness of the spread code used for the communications is determined by the radio network control apparatus and first uplink interference electric power and the first down-link transmission electric power, the allocation allowableness/disallowableness of the radio resource used for the communication is determined, and the allocation allowableness/disallowableness of the determined hardware in the base-station apparatus used for the communications is determined, by the base station apparatus, and the determination results on the allocation allowableness/disallowableness of the radio resources and predetermined hardware device are informed of the radio network control apparatus;
the radio network control apparatus sets the radio channel when each of all the determination results on the allocation allowableness/disallowableness for the above-mentioned spread code, predetermined hardware device and radio resource is affirmative. Ishikawa teaches: wherein allocation allowableness/disallowableness of the spread code used for the communications is determined by the radio network control apparatus (The reference teaches that the spreading

code accept/rejection allocation can be done as an improvement per col. 13 lines 27-38. The assignment of the spreading code inherently must be assigned by the channel controller because the spreading code must be assigned with a channel in order for the invention to work; therefore, spreading code allocation accept/reject or allowablness/disallowableness is done by the radio network controller); The first uplink interference electric power (col. 9 lines 45-62 and col. 13 lines 27-38); The allocation of allowableness/disallowableness of the radio resourced used for the communication is determined (15 per Fig 2 or radio channel controller determines channel allocation accept/reject per col. 9 lines 45-62)

And allocation of a predetermined hardware device in the base-station of apparatus used for the communication is determined by the base station apparatus (14 per Fig 2 or transceiver controller determined transceiver allocation accept/reject or allowableness/disallowablness per col. 9 lines 45-62 for the base station). The determination results on the allocation allowablness/disallowableness of the radio resources and predetermined hardware device are informed of to the radio network control apparatus (The transceiver controller, radio channel controller and spreading code controlling which is performed in the radio channel controller must inherently inform the radio channel controller of the accept/reject status of each of these resource in order for the prior art invention to work)

The radio network control apparatus sets the radio channel when each of all the determination results on allocation allowableness/disallowableness for the above-mentioned spread code, predetermined hardware device and radio resource is affirmative (The radio channel controller when each of the spreading code, transceiver, and channel are accept or affirmative when assigning a priority per col. 14 line 15-col 16 line 47)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the allowableness/disallowableness processing of Ishikawa to the method of the combination of Ishikawa and Herrig in order to assess the availability of spreading codes, transceivers, and channels before making a assignment

Referring to claims 7-9, the combination of the references teaches all of the limitations of claims 7-9 as argued in claim 6 except that in claims 7-9 the interference measurement is done in a different order and they have a claim limitation for determination of the radio channel between the base station and the mobile station claim 6. The radio channel between the base station and mobile station is performed by 15 per Fig2 or radio channel controller. All other claim limitations are taught by claim 6 because order is not relevant in a method claim.

Referring to claims 14-15 & 17, Ischikawa teaches the method as claimed in claim 1, and measurement of interference and allocation of channel or radio resource based upon interference measurement. Ishikawa does not expressly call for: measuring and summing first and second downlink interference

Herrig teaches: measurement of a total of downlink power and comparison with a threshold which is the same as measuring a first downlink transmission electric power which is the same as measuring a first downlink and adding to a second downlink transmission power and comparison to a threshold or adding a first and second electric interference power and comparison to determine if smaller than a fourth threshold per col. 1 lines 63-col. 2 line 14

It would have been obvious to add the downlink power measurement and thresholding of Herring to the method of the combination of Ishikawa and Herrig in order to build a system which is

concerned with both interference of base stations and mobiles when making assigns of spreading codes, transceivers, and channels.

Referring to claim 16, the combination of Ishikawa and Herrig teach the method as claimed in claim 14, wherein the second downlink transmission electric power is measured. ,
The combination Ishikawa and Herrig do not expressly call for: derived for every classification of communication. Ishikwa teaches: performed in TDMA and FDMA or every classification of communication per col. 13 lines 27-38. It would have been obvious to add the every classification of communication to the method of the combination of Ishikawa and Herrig in order to allocate resources based upon interference measurements.
Referring to claim 18, the combination of Ishikawa and Herring teach the method of claim 14 measurement on a second downlink signal. The combination of Ishikawa and Herrig do not expressly call for: interference to be measured on a pilot signal . The examiner takes official notice that measurement of interference on a pilot signal is well known in the art. It would have been obvious to add the measurement of interference on a pilot to the method of Ishikawa and Herrig because measurement of interference on a pilot signal is well known in the art.

Referring to claims 19-22, the arguments for claims 14 and 15 explains all of the limitations of claims 19-22 except for the order in which the measurement and the allocation determination is made. Claims 19-22 are method claims and the order in which steps are performed are irrelevant therefore it would have been obvious to make the measurement and allocation determination in a different order.

10. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa (U.S. Patent No.: 5,666,655)

Referring to claim 10 & 11, Ishikaw teaches the method of 1 and measuring the total uplink interference power relative to a single threshold and allocation is allowable. Ishikaw does not expressly call for: breaking the uplink power into two sums and then comparing them to a threshold. Ishikawa teaches: one total sum and comparing to a threshold.col 9 lines 45-67 & per col. 13 lines 27-40.

It would have been obvious to one of ordinary skill in the art at the time of the invention that comparing total interference power for a given time interval to a threshold is the same as adding interference power averaged for two contiguous intervals to a threshold is the same function because addition of two intervals interference power compared to a threshold because addition is communitive.

Referring to claim 12, claim 10 teaches all of the limitation of claim 11 except for derived for every classification of communications. The applicant broadly claims "derived for every classification of the communications". The reference teaches that this can be applied to TDA or FDMA per col. 13 lines 26-37 or every classification of communication.

It would have been obvious to add performance of this method in other systems of Ishikawa to the method making allocations of resources of Ishikawa in order to allocate resources in other types of communication systems.

11. Claims 32-38 are is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa (U.S. Patent No.: 5,666,655) in view of Herrig (U.S. Patent No.: 6,591,108) further in view of Faber (PCT EP 0 961 417)

Referring to claims 32-38, claim 28 teaches all of the limitations of claims 32-38 except for measuring against 1st and 2nd thresholds for both uplink and downlink and making an allocation based upon both uplink and downlink

Herrig teaches measuring uplink interference as well as downlink interference comparing to uplink interference to a single threshold and downlink interference to another threshold.

It would have been obvious to add the comparison and threshold of Herrig to the method of claim 28 in order to insure that interference measurements at both the base and mobile are accounted for when assigning resources.

The combination does not expressly call for: first threshold and second threshold for both uplink and downlink comparison

Faber teaches: using a first threshold and second threshold for both uplink and downlink comparison per Pg 4 line 39-Pg 5 line 56.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the thresholding of Faber to the combination in order to get a more accurate measurement on the interference before assigning resources.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa (U.S. Patent No.: 5,666,655) in view of Fukagawa (U.S. Patent No.: 6,188,913)

Referring to claim 13, Ishikawa teaches: the method of claim 10 and measuring a second uplink interference power.

Ishikawa does not expressly call for: measuring chip rate in order to determine interference power.

Fukagawa teaches: that chip rate is proportional to interference per col. 1 line 50-67.

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize measuring chip rate of Fukagawa in place of the interference measurement of Ishikawa because chip rate is proportional to interference.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571/272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DORIS H. TO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Robert W Wilson
Examiner
Art Unit 2616

RWW
3/27/06